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TITLE: COFL-FF-EP-4.4.6-2 SOP10 Spent Mercury-containing Lamps

System: Spent Mercury-containing Lamps	Procedure No. : SOP 10
Subsystem: Training	Page No. : Page 1 of 4
Person Responsible: Program Manager	Revision No. :
	Revision Date :

A generator of universal waste lamps may use crushing equipment on-site to reduce the volume of the stored lamps provided that:

1. This is done in a final accumulation container; the lamps are crushed in a controlled manner that prevents the release of mercury vapor or other contaminants;
2. The crushing operations and maintenance of the unit are performed in accordance with written procedures developed by the manufacturer of the equipment including specific instructions for the frequency of filter changes;
3. Employees using this equipment are thoroughly familiar with these written procedures and emergency procedures should equipment malfunction occur.

Generators of spent universal waste lamps or devices that manage them in accordance with chapter 62-737 The Management of spent mercury containing lamps and devices destined for recycling. and Rule 62-730.185, F.A.C., are not required to include these wastes when making hazardous waste generator status quantity determinations under 40 CFR 261.5 or Part 262.



1. Definitions

- a. "Ampoule" means an enclosed vessel containing liquid mercury or mercury amalgam and that is a component of a mercury-containing lamp or device and can typically be removed intact from that mercury-containing lamp or device.
- b. "Daily processing capacity" means the maximum amount of spent lamps, mercury-containing devices, or mercury-containing residuals, expressed as tons of materials, which can be fully processed by the processing equipment within 24 hours.
- c. "Generator" means any person whose act or process produces spent mercury-containing lamps or devices.
- d. "Mercury-containing devices" means any electrical product, or other devices, excluding a battery or a mercury-containing lamp, that is unprocessed and has been determined by the Department as proven to release mercury into the environment. The Department has determined that the following items are included in this definition: mercury thermostats, electric mercury switches and relays, thermometers, manometers, ampoules removed from lamps or these devices in accordance with the 40 CFR 273.13 or 273.33 thermostat ampoule removal standards as adopted by reference under Rule 62-730.185, F.A.C., and other devices which contain liquid mercury as a component necessary for their operation.
- e. "Mercury-containing lamp" means any type of high or low pressure lighting device that is unprocessed such as being crushed by a generator per paragraph 62-737.400(6)(b), contains mercury, and that generates light through the discharge of electricity either directly or indirectly through a fluorescing coating. This term includes fluorescent lamps, mercury vapor lamps, metal halide lamps, high pressure sodium lamps and neon lamps containing mercury. The term excludes mercury-containing lamps used in residential applications and that are disposed of as part of ordinary household waste. For the purposes of this chapter, except for annual reporting requirements under subsection 62-737.800(12), it is assumed that 4 unbroken lamps are equal to 1 kilogram in weight.
- f. "Spent" means has been used, removed from service and is to be discarded.
- g. "Universal waste device" or "device" means any mercury-containing device, excluding one generated by a household exempted under 40 CFR 261.4(b)(1), that is also characteristically hazardous for mercury under 40 CFR 261.24 and is being managed in accordance with this chapter.

2. Purpose:

This SOP has been developed to promote safe work and responsible environmental practices related to the environmentally responsible recycling of spent mercury-containing lamps, and to provide for the proper management of these lamps, including compliance with regulations and reducing the potential for negative environmental impacts.



3. Scope:

- a. To establish procedures for the safe handling of spent mercury containing lamps.
- b. To maintain the fluorescent lamp crushing system in quality working order.

4. Responsibility:

- a. The **Program Manager** shall ensure that employees responsible for the handling of spent mercury-containing lamps are properly trained.
- b. Adherence to these written procedures will be the responsibility of City employees, responsible for the handling of spent mercury-containing lamps.
- c. This includes related maintenance of bulb crushing equipment and record keeping.
- d. Overall monitoring of this procedure including inspections related to the handling of spent mercury-containing lamps.

5. Procedure/process:

1. Employees Communicate/understand potential hazards by reviewing pages 18-23 of the bulb crushing unit manual and complete online training program at www.BulbEaterTraining.com
2. Before crushing, label drum as containing Mercury (D009) Universal Waste.
3. Crush lamps in a well-ventilated area.
4. Wear safety glasses, protective gloves, and ear protection.
5. Screw in appropriate entry tube for lamp diameter.
6. Remove rubber plug from top of entry tube.
7. Crush only straight fluorescent and u-tube lamps.

6. Training/Education

- a. Employees connected with handling and crushing of spent mercury containing lamps must review and fully understand this SOP when working within the bulb crushing area and or handling fluorescent lamps.
- b. Signage must be present at the bulb crushing area detailing the procedure.
- c. This SOP is reviewed with employees connected with the handling of spent fluorescent containing lamps on a yearly basis and documented in the employee training log.

7. Consequences

Failure to comply with this SOP may:

- Result in fines for non-compliance to environmental laws and regulation relative to the discharge of hazardous waste.
- Violate COFL policy.



RECORDS

Record	Where Filed	Responsible Individual	Indexing Method	Minimum Retention Time

REVISION LOG

Revision No.	Revision Date	Description of Change(s)

AUTHORIZATION

Name	Title	Date